

## **REMARKS**

Claims 1, 2, 11-15, 19, 20, 22, 24, 26, 39, 47, 52, 61, 62, 70, 71, 73, 80, 86, 91 and 96-99 have been amended. Claims 21 and 82 have been cancelled. Therefore, claims 1-20, 22-81 and 83-99 are pending in the application. Reconsideration is respectfully requested in light of the following remarks.

### **Section 101 Rejection:**

The Examiner rejected claims 96-99 under 35 U.S.C. § 101 as being directed to non-statutory subject matter. Applicants traverse this rejection. However, to expedite prosecution of the application, claims 96-99 have been amended to recite, “A tangible, computer-readable storage medium comprising program instructions ....” Applicants respectfully request removal of the § 101 rejection.

### **Provisional Double Patenting Rejections:**

The Examiner provisionally rejected claims 1-99 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-61, 1-40, 1-71, 1-203, 1-116 and 1-111 of co-pending Application Nos. 10/055,649, 10/055,645, 10/055,741, 10/055,641, 10/055,773 and 10/054,809, respectively. Applicants traverse this rejection on the grounds that the Examiner has not stated a proper *prima facie* rejection. The only support given by the Examiner for the rejection is that “they are not patentably distinct from each other because of their similarities.” However, simply having similarities is not a proper reason for holding the claims of the present application obvious from the claims of the listed applications. According to MPEP 804.II.B.1, “the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection.” This section of the MPEP also states that the same “factual inquiries ... that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are employed when making an obviousness-type double patenting analysis.” MPEP 804.II.B.1 also states

that the Examiner should list the differences between **each** rejected claim and the claims of the other patent/application, and for **each** difference the Examiner should give the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim is an obvious variation of the invention defined in a claim of the other patent/application. Simply stating that the claims have similarities is not a valid reason why a person of ordinary skill in the art would conclude that the invention defined in each claim is an obvious variation of the invention defined in a claim of the other patent/application. Nor has the Examiner specifically addressed **each difference of each claim** of the present application compared to the claims of the other applications. Instead, the Examiner improperly lumped all the claims together and did not address each specific difference. The Examiner clearly has not met the requirements stated in MPEP 804.II.B.1 to establish a *prima facie* obviousness-type double patenting rejection. Accordingly, Applicants respectfully request removal of the provisional double patenting rejections of claims 1-99.

**Claims Objected To But Otherwise Allowable:**

Claims 4-7, 21, 22, 24, 26, 30, 46, 47, 73, 81-83, 88, 89 and 93-95 were objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

**Section 102(e) Rejection:**

The Examiner rejected claims 1, 8 and 16-20 under 35 U.S.C. § 102(e) as being anticipated by Zhang (U.S. Patent 6,810,259), claims 39-41 as being anticipated by McCanne, et al. (U.S. Patent 6,415,323) (hereinafter “McCanne”) and claim 61 as being anticipated by Borella, et al. (U.S. Patent 6,269,099) (hereinafter “Borella”). Applicants respectfully traverse this rejection for at least the following reasons.

Regarding claim 1, the Examiner has stated that independent claim 50 is in condition for allowance. Independent claim 1 has been amended to include the additional

features of claim 50. Therefore, Applicants assert that claim 1 is in condition for allowance.

Independent claims 70 and 96 include limitations similar to claim 1 for a method and a tangible, computer-readable storage medium comprising program instructions, respectively, and were rejected on the same grounds as claim 1. Claims 70 and 96 have also been amended to include the additional features of claim 50. Therefore, Applicants assert that these claims are also in condition for allowance.

Further regarding claim 1, Applicants assert that Zhang does not teach *a plurality of peer nodes configured to participate in a peer discovery protocol to discover other peer nodes and to discover one or more of the plurality of peer groups, wherein said discovering one or more of the plurality of peer groups comprises discovering one or more peer group advertisements for the one or more of the plurality of peer groups*. While Zhang describes a neighbor discovery process and a topology discovery process, neither of these comprises discovering one or more peer group advertisements, as recited in claim 1:

Applicants remind the Examiner that anticipation requires the presence in a single prior art reference disclosure of each and every limitation of the claimed invention, arranged as in the claim. M.P.E.P 2131; *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*, 221 USPQ 481, 485 (Fed. Cir. 1984). The **identical** invention must be shown in as complete detail as is contained in the claims. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). As discussed above, Zhang clearly cannot be said to anticipate claim 1.

Claims 70 and 96 include limitations similar to claim 1, and so the arguments presented above apply with equal force to these claims, as well.

For at least the reasons above, the rejection of claims 1, 70 and 96 is unsupported by the cited art and removal thereof is respectfully requested.

Regarding claim 20, the Examiner stated that claim 21 would be allowable if rewritten in independent form. Independent claim 20 has been amended to include the allowable subject matter of claim 21. Therefore Applicants assert that claim 20 is in condition for allowance.

Regarding independent claim 39, contrary to the Examiner's assertion, McCanne does not teach or suggest program instructions executable by the processor to *create an advertisement for a peer group in accordance with a protocol, wherein said advertisement for the peer group comprises: an identifier for the peer group; a description of a common set of services to be instantiated within the peer group by members of the peer group; and a membership service advertisement indicating how other peers may request to join the peer group; and publish at least a portion of said advertisement for the peer group including said identifier and said membership service advertisement.*

In regard to claim 39, the Examiner cites column 8, lines 14-23 as teaching *create an advertisement for a peer group in accordance with a protocol, wherein said advertisement for the peer group.* This citation describes, "To provide the services that underlie the anycast routing infrastructure, the CBB deploys service nodes in the master AS and arranges for those nodes to advertise reachability for A using the master AS's IGP." However, these advertisements are clearly not advertisements for a peer group, but are routing advertisements for reaching a block of addresses. (See, e.g., column 7, lines 31-54.)

The Examiner cites column 18, lines 18-24 as teaching *comprises an identifier for the peer group.* However, this passage describes that an ARN "is provisioned with the IP addresses of some number of adjacent service nodes." Applicants assert that one or more individual IP addresses for some number of adjacent service nodes is clearly not an

identifier for a peer group, nor is it described as such. Furthermore, there is nothing in Zhang to indicate that these IP addresses are comprised in a peer group advertisement.

The Examiner cites column 8, lines 24-39 as teaching that the peer group advertisement comprises *a description of a common set of services to be instantiated within the peer group by members of the peer group*. However, this citation only describes installing service nodes and advertising anycast blocks. It does not describe a peer group advertisement comprising a description of a common set of services to be instantiated by peer group members, as in claim 39.

The Examiner cites column 5, line 61 – column 6, line 4 as teaching *a membership service advertisement indicating how other peers may request to join the peer group*. This passage mentions that “hosts can join and leave anycast groups dynamically,” and “only specially configured hosts within the network infrastructure are members of an anycast group.” However, it describes nothing about a membership service advertisement, much less one that indicates how other peers may request to join the peer group.

Finally, the Examiner cites column 9, lines 28-47 as teaching *publish at least a portion of said advertisement for the peer group including said identifier and said membership service advertisement*. This passage describes determining a location of services by translating a numeric anycast address into a DNS domain name according to a translation algorithm. This clearly has nothing to do with publishing a membership service advertisement, much less one having the limitations recited in claim 39.

For at least the reasons above, the rejection of claim 39 is unsupported by the cited art and removal thereof is respectfully requested.

Claims 86 and 98 include limitations similar to claim 39, and so the arguments presented above apply with equal force to these claims, as well.

Regarding independent claim 61, the Examiner has stated that independent claim 50 is in condition for allowance. Independent claim 61 has been amended to include the additional subject matter of claim 50. Therefore, Applicants assert that claim 61 is in condition for allowance.

In addition, Applicants assert that Borella fails to teach or suggest *means for a subset of said plurality of peer nodes to discover other peer nodes and discover one or more peer groups according to a discovery protocol, wherein said discovering one or more peer groups comprises discovering one or more peer group advertisements for the peer groups*. The Examiner cites column 6, lines 34-60 as teaching this limitation. While this passage does describe a discovery protocol, it does not describe discovering one or more peer groups, as recited in claim 61. In fact there is nothing in Borella that describes peer groups at all. In addition, there is nothing in this passage or elsewhere in Borella that describes peer group advertisements. The Examiner's citation describes a peer discovery marker and a peer discovery table. The peer discovery marker includes a network address field, described this way, "Network address-field 52 is a 4-byte field containing a network address (e.g., IP address) of a network device that wishes to be discovered." This clearly does not describe a peer group advertisement, as it specifically refers to one device.

Further regarding claim 61, Borella fails to teach or suggest *means for the subset of said plurality of peer nodes to join said discovered peer groups according to a membership protocol; and means for each of the one or more peer groups to share a common set of services among member peer nodes of the particular peer group only, so that the particular peer group defines a limited domain of availability for said services*. The Examiner cites column 7, lines 37-51 as teaching these limitations. However, this passage describes two edge routers that have discovered each other establishing a two-way peer-to-peer data flow between themselves. This clearly has nothing to do with joining a discovered peer group according to a membership protocol, or sharing a common set of services among peer group members, as recited in claim 61. In fact, as discussed above, Borella does not teach or suggest peer groups or peer group

advertisements at all. Borella also fails to teach or suggest peer groups of peer nodes comprising means to implement the discovery and membership protocols recited in claim 61.

For at least the reasons above, the rejection of claim 61 is unsupported by the cited art and removal thereof is respectfully requested.

Regarding independent claim 80, the Examiner stated that claim 82 would be allowable if rewritten in independent form. Claim 80 has been amended to include the allowable subject matter of claim 82. Therefore Applicants assert that claim 80 is in condition for allowance.

Regarding claims 90 and 99, the Examiner rejected claims 90 and 99 under the same rationale as claims 1-3, 8-20, 31, 37, 39-42, and 61. However, the scope of claim 90 differs from these other claims. For example, claims 90 and 99 recite *a peer node in a peer-to-peer network initiating a peer group discovery query in accordance with a peer discovery protocol*. While other claims include limitations involving discovery queries, none of the claims listed above includes a limitation involving initiating a peer group discovery query. **Since the Examiner failed to address the differences between claims 90/99 and the other claims, the Examiner has failed to state a *prima facie* rejection of claims 90/99.** Applicants also assert that none of the cited references, whether considered alone or in combination, teach or suggest *a peer node in a peer-to-peer network initiating a peer group discovery query in accordance with a peer discovery protocol*.

For at least the reasons above, the rejection of claims 90 and 99 is unsupported by the cited art and removal thereof is respectfully requested.

Regarding claim 97, this claim includes limitations similar to claim 80 for a tangible, computer-readable storage medium comprising program instructions, and was rejected on the same grounds. The Examiner stated that claim 83 would be allowable if rewritten in independent form. Claim 97 has been amended to include the allowable subject matter of claim 83. Therefore Applicants assert that claim 97 is in condition for allowance.

#### **Section 103(a) Rejections:**

The Examiner rejected claims 2, 3 and 11 under 35 U.S.C. § 103(a) as being unpatentable over Zhang as applied to claim 1 above, and further in view of McCanne, claims 9 and 10 as being unpatentable over Zhang as applied to claims 1 and 8 above, and further in view of Dutta, et al. (U.S. Publication 2002/0073204) (hereinafter “Dutta”), claims 12-14 as being unpatentable over Zhang as applied to claim 1 above, and further in view of Periasamy, et al. (U.S. Patent 6,065,062) (hereinafter “Periasamy”), claims 15 as being unpatentable over Zhang and Periasamy as applied to claims 1 and 12-14 above, and further in view of McCanne, claim 31 as being unpatentable over Zhang as applied to claim 20 above, and further in view of Lee (U.S. Patent 6,122,283), claims 37 as being unpatentable over Zhang and Periasamy as applied to claims 20 and 35 above, and further in view of Lowery, et al. (U.S. Publication 2002/0107935) (hereinafter “Lowery”), and claim 42 as being unpatentable over McCanne as applied to claim 39 above, and further in view of Dutta. Applicants traverse these rejections for at least the reasons given above in regard to the independent claims.

In regard to the rejections under both § 102(e) and § 103(a), Applicants assert that numerous ones of the dependent claims recite further distinctions over the cited art. However, since the rejections have been shown to be unsupported for the independent claims, a further discussion of the dependent claims is not necessary at this time.



## CONCLUSION

Applicants submit the application in condition for allowance, and prompt notice to that effect is respectfully requested.

If any extension of time (under 37 C.F.R. § 1.136) is necessary to prevent the above-referenced application from becoming abandoned, Applicants hereby petition for such an extension. If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-07000/RCK.

Also enclosed herewith are the following items:

- ☒ Return Receipt Postcard
- ☐ Petition for Extension of Time
- ☐ Notice of Change of Address
- ☐ Other:

Respectfully submitted,



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